

What is claimed is:

1. In a magnet type clutch device constructed by combining a magnet coupling and an electromagnetic clutch wherein the electromagnetic clutch is constructed by a magnetizing coil arranged within a clutch rotor fixed to an input shaft, and the magnet coupling has a permanent magnet rotating body rotatably supported by an output shaft, an armature held by this rotating body so as to be moved forward and backward, a disk fixed to said output shaft, and a conductor or a hysteresis material attached to said disk so as to be opposed to the permanent magnet mounted to said permanent magnet rotating body with a slight gap therebetween, and is constructed so as to integrally rotate the permanent magnet rotating body and said disk by an attractive action taken between said permanent magnet and the conductor or the hysteresis material, and is controlled so as to be turned ON/OFF by said electromagnetic clutch; the improvement that the permanent magnet mounted to said permanent magnet rotating body is set to have multiple poles in the circumferential direction, and magnetic loop elements are alternately assembled in the circumferential direction on the inner and outer circumferential sides of each of the S and N poles, and the rotation speed of said disk can be changed by switching and controlling the direction of a magnetic flux of said electromagnetic clutch.

2. The magnet type clutch device according to claim 1, wherein said armature is held in said rotating body by a leaf spring so as to be moved forward and backward by predetermined distances.

3. The magnet type clutch device according to claim 2, wherein said permanent magnet rotating body is rotatably supported in said output shaft by a bearing device.

4. The magnet type clutch device according to claim 1, wherein said permanent magnet rotating body is rotatably supported in said output shaft by a bearing device.

5. In a magnet type fan clutch device constructed by combining a magnet coupling and an electromagnetic clutch and having a fan attached to the magnet coupling side wherein the electromagnetic clutch is constructed by a clutch rotor rotatably supported by a fixing shaft, and a magnetizing coil arranged within this rotor, and the magnet coupling has a permanent magnet rotating body rotatably supported by said fixing shaft, an armature held by this rotating body so as to be moved forward and backward, a disk with a fan rotatably supported by said permanent magnet rotating body, and a conductor or a hysteresis material attached to said disk so as to be opposed to the permanent magnet mounted to said permanent magnet rotating body with a slight gap therebetween, and is constructed so as to integrally rotate the permanent

magnet rotating body and said disk by an attractive action taken between said permanent magnet and the conductor or the hysteresis material, and is controlled so as to be turned ON/OFF by said electromagnetic clutch; the improvement that the permanent magnet mounted to said permanent magnet rotating body is set to have multiple poles in the circumferential direction, and magnetic loop elements are alternately assembled in the circumferential direction on the inner and outer circumferential sides of each of the S and N poles, and the rotation speed of said disk with the fan can be changed by switching and controlling the direction of a magnetic flux of said electromagnetic clutch.

6. The magnet type fan clutch device according to claim 5, wherein said armature is held in said rotating body by a leaf spring so as to be moved forward and backward by predetermined distances.

7. The magnet type fan clutch device according to claim 6, wherein said clutch rotor and said permanent magnet rotating body are rotatably supported by said fixing shaft through a bearing device.

8. The magnet type fan clutch device according to claim 6, wherein the N and S poles of the permanent magnet of a divisional structure are alternately arranged on the circular circumference of said permanent magnet rotating body, and the magnetic loop elements are alternately attached onto the inner and outer circumferential face sides of each magnet.

9. The magnet type fan clutch device according to claim 5, wherein said clutch rotor and said permanent magnet rotating body are rotatably supported by said fixing shaft through a bearing device.

10. The magnet type fan clutch device according to claim 5, wherein the N and S poles of the permanent magnet of a divisional structure are alternately arranged on the circular circumference of said permanent magnet rotating body, and the magnetic loop elements are alternately attached onto the inner and outer circumferential face sides of each magnet.